C16 plus/4

GAMES DESIGNER

Introduction

Here is the opportunity you have been waiting for! Now you can design your own computer games without the need to study complicated programming techniques. At last you can play games with the features that YOU want. Amaze your friends by producing a range of professional quality software every bit as good as the games you buy in the shops. GAMES DESIGNER takes the emphasis off complex programming knowledge and places it firmly on YOUR creativity.

With GAMES DESIGNER you can:

★ design intricate background scenes,
★ create 'aliens' with cartoon animation,
★ set the rules and general characteristics that YOU want,
★ save your game on cassette,
and, most importantly
★ play YOUR game.

Setting Up

Read all instructions carefully. Check you have followed the correct procedure for setting up your C16. Before switching on, check that your COMMODORE Cassette Unit is correctly plugged in and ready for use. If you are using a joystick insert it into port Joy 1. Ensure that the cassette unit is kept as far away as

possible from the TV. Now switch on both your C16 and TV and turn up the volume. The screen displays the "READY" signal and a flashing cursor.

NOTE: It is always advisable to turn the C16 off and then on again before loading a new program. This clears all the memory locations and minimizes load errors.

Loading

★ Insert the program cassette into the cassette unit.
★ Ensure that the tape is fully rewound to the beginning.
★ Type LOAD and press the RETURN key.
★ Press PLAY on the cassette unit and the game will load.
★ Press the STOP key on the cassette unit when the program has loaded.

Using Games Designer

There are four main activities involved in creating a game using GAMES DESIGNER. These are:

1. Design the game background.
2. Design the moving characters (known as sprites).
3. Set the scoring system, rules and general characteristics of the game.
4. Play your game.

As activities 1 and 2 both involve editing shapes we will deal with this first.

Editing Shapes

When the game has loaded you are presented with the main editing screen (fig. 1). Here you create the shapes to use in your game. The cursor should be on the shape pallet (the large rectangle) at the top of the screen. If for any reason it is not on the shape pallet then place it there by pressing 'P'.

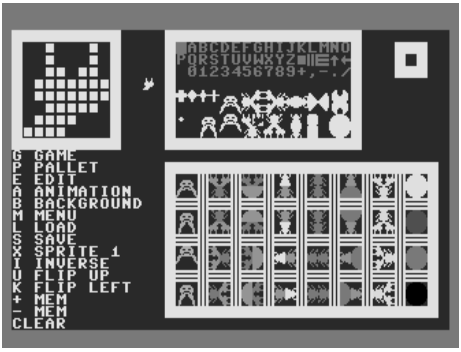

fig. 1

You will notice that the pallet contains letters, numbers, and an assortment of other shapes. Any of the items on this pallet can be changed (redefined) by you for use in your game. The cursor can be moved around the pallet using the cursor keys or a joystick. The shape directly beneath the cursor is magnified and displayed in the edit box in the top left corner of the screen. The same shape is also displayed between the pallet and the edit box in its normal size.

It is recommended that, for the time being, you do not redefine the shapes shown in red on the pallet. These characters are used in GAMES DESIGNER's screen displays, and redefining them will alter the messages on the screen.

The shapes have different effects when used in the game depending on which row of the pallet they came from. The significance of the rows is outlined below.

Rows 1-4 are GO shapes.

Row 5 are EAT and GO shapes.

Row 6 are DIE shapes.

Rows 7-8 are STOP shapes.

GO shapes are shapes which allow sprites to move freely over them.

DIE shapes, as the name suggests, cause a sprite to 'die' if it comes into contact with them. The first character on line six is always the bullet in a shooting game.

STOP shapes will not allow a sprite to move over them. They act as walls in a game.

EAT and GO shapes create a special effect. They are shapes which appear to be eaten when the player collides with them. This effect is achieved by having four shapes which are displayed in quick succession. There are 16 shapes on row five. These are split into four imaginary groups of four with an animation sequence of 1234/1234/1234/1234. When the player collides with a number 1 shape it immediately changes to the number 2 shape from the same group. This in turn changes to the number 3 shape which then changes to the number 4 shape. By careful design of the four shapes in each group the effect of the shape disappearing as it is 'eaten' by the player can be achieved. When the shape has been eaten the player continues on his way.

Bearing in mind the above information select a shape to redefine. Move the cursor over the selected shape and press 'E'. The cursor moves to the edit box and may be moved around within this box in the same way as before. Pressing the FIRE button or SPACE BAR alternates the square under the cursor between off and on. Each square which is switched on draws a tiny dot (called a pixel). Those squares which are switched off leave a blank pixel. Each pixel can be set either off or on using this method until the desired shape is achieved.

Press 'P' to return to the pallet at any time.

Some special functions have been incorporated into the editing facility of the program to make it easier to use.

INVERSE. Pressing 'I' causes each pixel of a shape to be inverted i.e. all pixels which were on will be switched off and all pixels which were off will be switched on.

FLIP UP. Pressing 'U' causes the shape to flip upside-down.

FLIP LEFT. Pressing 'K' causes the shape to rotate on a vertical axis.

+ MEM. Pressing '+' causes the shape to be remembered by the computer. The shape which is in memory is displayed in the small box in the top right of the scree. This facility is useful when several very similar shapes are to be created. The basic shape can be held in memory and transferred to several other positions on the pallet for later modification.

– MEM. Pressing '–' causes the shape in memory to be drawn in the present cursor position ready for modification.

CLEAR. Holding down the SHIFT key and pressing CLEAR HOME clears the shape leaving all pixels switched off.

Designing the Background for your Game

The background scenery of your game is created using the shapes you have just redefined. Select a shape which you want to use by moving the cursor over it then press 'B'. The background of the game already in the computer's memory is displayed on the screen. This may be cleared by holding down the SHIFT key and pressing CLEAR HOME.

Your redefined shape may be drawn anywhere on the screen by pressing the FIRE button or SPACE BAR when the cursor is in the required position. If you want to change the colour of the shape then press 'C'. A pallet displaying 121 different blocks of colour appears at the top of the screen (fig. 2). Move the cursor over the colour you require and press the FIRE button or SPACE BAR. The colour pallet disappears and all future shapes are drawn in the colour until such times as you select another colour.

To return to the edit screen to select another shape press the ESC key at the top left of the keyboard.

Build up the background to your game by selecting shapes and colours and placing them on the screen as described above. Some very subtle effects can be achieved by careful use of the Commodore 16's 121 colours.

NOTE: Bullets and sprites 'wrap around' the screen ie. they may leave the screen at one side and reappear at the other. If you do not want this to be a feature of your game then it is advisable to have a border of STOP characters around the screen. This need not be an

obvious border as the characters can be the same colour as the background and therefore invisible.

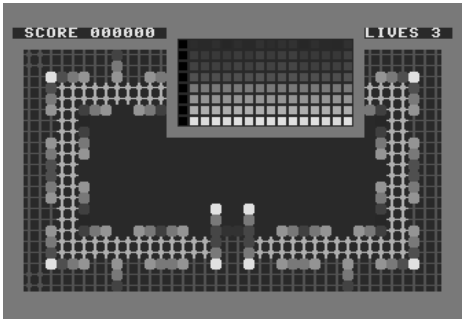

fig. 2

Changing the Screen Background and Border Colour

To change the colour of the screen background or border press 'C' when the background screen is visible. The colour box appears as before. Move the cursor over the required colour and press 'S' to change the screen background, or 'B' to change the screen border to the selected colour.

Designing Sprites

There are eight objects which can move around the screen during a game. These objects are known as sprites. The first sprite is under the control of the player and may be moved using either the cursor keys or a joystick. The other seven sprites move around the screen either randomly or in a pre-set pattern.

The large pallet at the bottom of the screen contains an 8 X 4 grid of sprites. Each column represents one sprite and shows it in each of its four positions. These four positions can be used either to show the sprites facing the direction of movement (directional animation) or can be repeatedly displayed in quick succession (repeating animation) to give a cartoon effect e.g. walking, waving etc.

If directional animation is required then the sprites should be defined in the order UP, DOWN, LEFT, RIGHT starting at the top of the column. If repeating animation is required then the sprite will start in the top position and repeatedly display each position in turn.

Each sprite is built up using four shapes from the shape pallet. Simply select the required shape then press 'A' for Animation. The cursor then moves to the sprite pallet. Position the shape using the cursor keys or joystick then press the FIRE button or SPACE bar to fix it in position. The row from which a shape is taken has no relevance when editing sprites.

A new colour can be selected in the same way as when designing the background scenery. Simply press 'C' to display the colour pallet, move the cursor over the colour required and press the FIRE button or SPACE BAR.

Setting the Rules of the Game

The rules of the game and the characteristics of each sprite are set using the menu. Options 1 and 2 from the menu apply to the game in general and need only be set once. The remaining option must be set separately for each sprite.

Pressing 'X' causes the sprite number at the left of the edit screen to step through each sprite in turn. Use this key to select the sprite you wish to set then press 'M' to enter the menu.

The sprite number is displayed at the top of the screen followed by a number of options. Sprite 1, being the player, has six options whereas sprites 2-8 have nine options. Select the required option by pressing the relevant number.

1. SHOOTING. You are asked in which direction you want the player to shoot when moving up, down, left, and right. Select a number for each direction. If you want to always shoot in the direction you are moving then you should enter 1, 2, 3, 4. If you do not want to shoot at all then enter 5, 5, 5, 5. You are returned to the menu automatically when a number has been entered for each direction.

2. LEVEL CHANGE. You are asked to enter the number of points a player must gain before he moves on to the next level. This number must be between 500 and 30000. During the game a level change will be signified by a tone and a speeding up of the action. Once level four is reached the game will be at its maximum speed.

3. MOVEMENT SPEED. This option allows you to decide how quickly the chosen sprite moves around the screen. Enter the speed as a number in the range 0-255 then press RETURN. The higher the number entered the faster the sprite will move.

4. ANIMATION SPEED. This option allows you to decide how quickly the chosen sprite goes through its animation sequence. Enter the speed as a number between 0-255 then press

RETURN. This option does not apply to directional animation.

5. TYPE OF ANIMATION. Here you select either Repeating Animation, where the sprite repeatedly appears in each of its four definitions in turn to give the illusion of movement, or Directional Animation, in which the definition is displayed according to direction of movement. Make your selection by pressing the appropriate number.

6. COLLISIONS. This option lets you decide who dies when the player collides with an alien. Make your selection by entering either '1' or '2'. If you select '1' you are asked to enter a points value for that alien. Enter the number (0-255) then press RETURN.

7. SPEED OF APPEARING. This is the speed at which the selected sprite appears on the screen at the beginning of the game and after being killed. Enter a number between 0 and 255 then press RETURN. The higher the number the more quickly the sprite is likely to appear, although there is a built in random element.

8. TYPE OF MOVEMENT. With this option you can select the type of movement for this sprite. If you select Random Movement then the sprite will move around the screen in a random manner only changing direction when it comes up against an obstacle. If you select Pattern Movement then the game screen appears with the sprite in its start position.

NOTE: If you have recently redefined the sprite you may find that the sprite on the screen is not the latest version. Don't worry! This is only a temporary measure. Once you start playing the game the new sprite will have caught up.

Use the cursor keys or joystick to guide the sprite around the screen following the desired pattern. This pattern will be remembered and recreated during the game. Press the FIRE button or SPACE bar when you have completed your pattern. As there is a limit to the number of changes in direction that the computer can remember long patterns can only be achieved if directional changes are kept to the minimum. You will automatically return to the menu should the computer's memory become full.

If you wish to set a new start position for any of the sprites you must go to the game background screen, move the cursor to the new starting position, hold down the SHIFT key and press the number of the sprite you wish to start in that position. As a sprite is four times as large as the cursor the cursor should be placed in the top left corner of where you want the sprite to appear. The sprite is shown in this position for a second or two so that you can check that the position is correct.

FINISH. This option returns you to the edit screen.

Playing Your Game

If you want to play the game in the computer's memory press 'G' when the edit screen is visible. At the end of the game you are returned to the edit screen. If you want to return to the edit screen before the end of the game then press the ESC key at the top left of the keyboard.

Saving Games

To save a game which you have created, first of all insert a blank cassette into the cassette recorder and wind the tape forward slightly to clear the leader tape. Return to the edit screen, if you are not already there, using the ESC key, then press 'S'. Press the RECORD and PLAY buttons on the cassette recorder simultaneously. The screen goes blank while the game is being saved and redisplays when saving is finished. As GAMES DESIGNER does not ask for a name for your saved game it is recommended that you mark your cassettes clearly so as to avoid confusion.

Loading Games

To load a game from tape first rewind the tape to the approximate starting position of the game. Return to the edit screen, if you are not already there, using the ESC key, then press 'L'. Press PLAY on the cassette recorder and the program loads the first game it finds on the tape.

Sample Games

When you load the GAMES DESIGNER program a sample game is automatically loaded in with it. This sample game is called 'Road Stunner'. This, along with another two sample games (Creature Crawl, and Space Desert), are also included on a separate tape in the GAMES DESIGNER package. To load one of these games simply follow the instructions in the LOADING GAMES section above.